

Title (en)

MEMORY SYSTEM HAVING PERSISTENT GARBAGE COLLECTION

Title (de)

SPEICHERSYSTEM MIT DATENMÜLLSAMMLUNG

Title (fr)

SYSTÈME DE MÉMOIRE AYANT UNE RÉCUPÉRATION DE PLACE PERSISTANTE

Publication

**EP 2441004 B1 20191218 (EN)**

Application

**EP 10786789 A 20100609**

Priority

- US 2010037987 W 20100609
- US 18662609 P 20090612

Abstract (en)

[origin: WO2010144587A2] Non-volatile memory systems such as those using NAND FLASH technology have a property that a memory location can be written to only once prior to being erased, and a contiguous group of memory locations need to be erased simultaneously. The process of recovering space that is no longer being used for storage of current data, called garbage collection, may interfere with the rapid access to data in other memory locations of the memory system during the erase period. The effects of garbage collection on system performance may be mitigated by performing portions of the process contemporaneously with the user initiated reading and writing operations. The memory circuits and the data may also be configured such that the data is stored in stripes of a RAID array and the scheduling of the erase operations may be arranged so that the erase operations for garbage collection are hidden from the user operations.

IPC 8 full level

**G06F 12/02** (2006.01); **G06F 12/06** (2006.01)

CPC (source: EP KR US)

**G06F 12/02** (2013.01 - KR); **G06F 12/0246** (2013.01 - EP US); **G06F 12/06** (2013.01 - KR); **G06F 2212/7205** (2013.01 - EP US)

Cited by

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**WO 2010144587 A2 20101216; WO 2010144587 A3 20110303**; CN 102576330 A 20120711; CN 102576330 B 20150128; EP 2441004 A2 20120418; EP 2441004 A4 20121226; EP 2441004 B1 20191218; EP 2441004 B8 20200219; KR 101324688 B1 20131104; KR 20120030137 A 20120327; US 10204042 B2 20190212; US 10754769 B2 20200825; US 2010325351 A1 20101223; US 2018373627 A1 20181227; US 2019129842 A1 20190502

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